

Abstract

The edge of an image is extracted, and edge information that includes the grade and the direction of the slope of the edge is obtained. The smoothing strength is calculated using the luminance of a pixel, and filter information is selected from the obtained edge information and the obtained smoothing strength. Then, digital data is smoothed by using the selected filter information. Since the filter information is set in advance, a fast smoothing process is implemented by selecting appropriate filter information. Further, the information for a smoothing range describes an elliptical shape when the slope is large, and the smoothing range is inclined in accordance with the direction of the slope. Therefore, noise near the edge can be thoroughly removed.